

WHAT IS CLAIMED IS:

1. A variable optical delay line comprising:
a plurality of optical fiber paths, each path comprising at least one reflective element and
a first region different in curvature from the other paths in the plurality to provide respectively
different optical delay paths; and
an optical switch for switching at least one optical input signal among the fibers of the
plurality.
2. The delay line of claim 1 wherein the optical switch comprises a MEMs mirror optical
switch.
3. The delay line of claim 1 wherein the at least one reflective element comprises a reflective
Bragg grating.
4. The delay line of claim 1 wherein the reflective element is switchable between reflection
and transmission.
5. The delay line of claim 1 wherein each path comprises a second region where the path is
parallel to the other paths in the plurality.
6. The delay line of claim 5 wherein a reflective element in each path comprises a Bragg
grating formed in the second region.
7. The delay line of claim 1 wherein each path comprises a plurality of refractive elements
switchable between reflection and transmission.
8. The delay line of claim 1 wherein the plurality of optical fiber paths comprise a plurality of
optical fibers secured to a substrate of sheet material.
9. The delay line of claim 1 wherein the at least one optical input signal is one optical input
signal and the optical switch comprises a 1XN MEMs mirror optical switch.

10. The delay line of claim 1 wherein the at least one optical input signal comprises a plurality of optical input signals and the optical switch comprises on NXN MEMs mirror optical switch.
11. The delay line of claim 1 wherein the at least one optical input signal comprises a plurality of optical input signals having respectively different wavelengths.